news from the
USDA Forest Service – Savannah River

Restoring the Longleaf/Savanna Ecosystem at the Savannah River Site

The restoration of the longleaf pine habitat and the savanna ecosystem at the Savannah River Site continues to see successful outcomes:

- Healthy forest restoration
- Phenotypically superior seed production
- Endangered species habitat maintenance
- Sustained yield timber production

The United States Department of Agriculture Forest Service-Savannah River (USFS-SR) has worked at the Savannah River Site (SRS) since the 1950s, when the Atomic Energy Commission (AEC) selected the area for construction as a nuclear defense material production facility. Settlement and agriculture had dramatically changed the landscape from presettlement times when the Coastal Plain physiographic province was one of longleaf pine forests maintained by frequent, growing season fires. USFS-SR inventoried and found the site to be comprised of 44% forest, 35% agriculture, 10% immature forest/old field/regeneration, 9% forest edge, and 3% brush/fallow/pasture. The long-range objective is to restore ecosystems that originally occupied the site with the understanding that management may not be able to recreate former presettlement conditions. The desired future condition for longleaf pine is 83,000 acres.

Following the SRS Natural Resources Management Plan, USFS-SR reports approximately 170,000 acres of the site are now forested. Between 1984 through today, USFS-SR has planted over 18,000 acres of longleaf pine and 17,500 acres of loblolly pine. In the early 1950s, non-native slash pine was planted due to the lack of technology to plant longleaf pine and the limited availability of loblolly seedlings. We convert hundreds of acres annually from slash pine.

Successful pioneering of longleaf restoration at SRS is based on a scientific protocol developed by the Southeast Experiment Station, now the Forest Service Southern Research Station that provides for collecting seeds from phenotypically superior trees, providing seed cold storage, bare root machine planting of seedlings within a 3-day maximum interval between lifting and planting, and using herbicides, shearing, raking, piling, and prescribe fire in site preparation. Our aggressive management at SRS also includes matching pine species to soils, moisture, and other physical conditions. Results? SRS healthy forests have lower susceptibility to insects, diseases, and damage from catastrophic events while also providing habitat for various endangered species (Red-cockaded woodpecker, smooth coneflower) and yielding timber harvest (70,000 hundred cubic feet sold in Fiscal Year 2009).

For additional information, please contact USFS-SR Natural Resources Assistant Manager, 803.725.8713.

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